

# STIC Search Report

# STIC Database Tracking Number: 212893

TO: Cheryl Lewis Location: RND 3B07

Art Unit: 2167

Tuesday, January 16, 2007

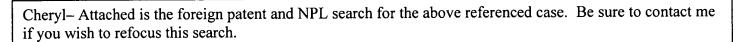
Case Serial Number: 10/780404

From: Ruth E. Spink Location: EIC 2100

RND-4B31 Phone: 23524

Ruth.spink@uspto.gov

# Search Notes



Ruth





# STIC EIC 2100 Search Request Form



Rc & Tockskel Information Center	
Today's Date:	What date would you like to use to limit the search? ゴキャー・
JANUARY 16, 2007	Priority Date: 2/17/2004 Other: 3/17/2003
Name Chery 1 Lewis	Format for Search Results (Circle One):
N AU <u>るいい </u> Examiner # <u> </u>	PAPER DISK EMAIL
	Where have you searched so far?
Room # 3507 Phone 3-4	USP DWPI EPO PO ACM IBM TDB
Serial # 10/780, 404	IEEE INSPEC SPI Other
Is this a "Fast & Focused" Search Req A "Fast & Focused" Search is completed in 2- meet certain criteria. The criteria are posted http://ptoweb/patents/stic/stic-tc2100.htm.	ruest? (Circle One) YES NO  -3 hours (maximum). The search must be on a very specific topic and in ElC2100 and on the ElC2100 NPL Web Page at
include the concepts, synonyms, keywords, a the topic. Please attach a copy of the abstrac	or other specific details defining the desired focus of this search? Please acronyms, definitions, strategies, and anything else that helps to describe ct, background, brief summary, pertinent claims and any citations of
relevant art you have found.	
	f APPEALS case? (Circle One) YES NO
Is this request for a BOARD of	(Circle One) YES NO
Is this request for a BOARD of	(Circle One) YES NO
Is this request for a BOARD of  Is this case a SPECIAL CASE?  Letriching a take  downent Determin	(Circle One) YES NO yet character string from an XML ing it a first entry (text string)
Is this request for a BOARD of  Is this case a SPECIAL CASE?  Letriching a take  downent Determin	(Circle One) YES NO yet character string from an XML ing it a first entry (text string)
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Is this request for a BOARD of  Is this case a SPECIAL CASE?  Letriching a take document Determine matches a node-  in the document to present, level, president of the sound is to space ID liaring is to spa	(Circle One) YES NO  get character string from an XML  ing it a first envey (text string)  type (stuced character string position)  tore. The node-type having a  etc.) in the XML dicument tree.  he entry matches a node-type's name  angth), element name ID, and the  stents or attribute data. It a  cd, then extence the character string  soring and the soring and accepted the
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Set
       Items
                Description
        20962
                S XML OR EXTENSIBLE()MARKUP()LANGUAGE
S1
                S S1 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
S2
         2345
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ? )
                S (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR KEY()WORD? ? OR
S3
        91925
TERM? ? OR WORD? ?) (5N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR SEARCHING
OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR LOCATOR? ? )
          165
                S S3 (10N) S1
                S S3 (30N) S1
          287
S5
                S NODE? ? (3N) (TYPE OR TYPES OR SORT OR SORTS OR KIND OR KINDS)
        7379
S6
                S (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR KEY() WORD? ? OR
        76494
S7
TERM? ? OR WORD? ?) (5N)((POSITION? ? OR PLACE OR PLACEMENT? ? OR LEVEL? ? OR SUBLEVEL?)
OR PARENT? ? OR CHILD OR CHILDREN)
               S (NAME()SPACE? ? OR NAMESPACE? ?)()(ID OR IDENTIFICATION? ? OR
           69
S8
IDENTIFIER? ?)
                S LENGTH OR LONG OR SIZE? ?
S9
      3309481
               S ELEMENT? ? (3N) (NAME? ? OR TITLE? ? OR LABEL? ? OR ID OR
       19171
S10
IDENTIFICATION? ? OR IDENTIFIER? ?)
               S ELEMENT? ? (3N) (ATTRIBUTE? ? OR PROPERTY OR PROPERTIES)
S11
        17391
               S ELEMENT? ? (3N) CONTENT? ?
        12982
S12
                S S5 (30N) (S6 OR S7) (30N) (S8 OR S9) (30N) S10 (30N) (S11 OR S12)
S13
            1
                S S2 (30N) (S6 OR S7) (30N) (S8 OR S9) (30N) S10 (30N) (S11 OR S12)
S14
            1
                S S14 NOT S13
S15
               S (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR KEY()WORD? ? OR
         1090
S16
TERM? ? OR WORD? ?) (5N) (HIERARCHY OR HIERARCHIES )
                S S2 (30N) S16 (30N) (S8 OR S9) (30N) S10 (30N) (S11 OR S12)
            0
S17
                S (MARK OR MARKED) () UP OR MARKUP OR SGML OR HTML OR TAG OR TAGS OR TAGGED
       182819
S18
OR METATAG?
                S S18 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
        18084
S19
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ? )
                S S19 (30N) (S6 OR S7 OR S16) (30N) (S8 OR S9) (30N) S10 (30N) (S11 OR
S20
            1
S12)
 : show files
```

# [File 348] EUROPEAN PATENTS 1978-2006/ 200702

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\*File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.

# [File 349] PCT FULLTEXT 1979-2006/UB=20070111UT=20070104

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\*File 349: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.

# [File 350] Derwent WPIX 1963-2006/UD=200703

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\*File 350: DWPI has been enhanced to extend content and functionality of the database. For more info, visit http://www.dialog.com/dwpi/.

```
Items
               Description
Set
                S XML OR EXTENSIBLE()MARKUP()LANGUAGE OR (MARK OR MARKED)()UP OR MARKUP OR
       187500
S1
SGML OR HTML OR TAG OR TAGS OR TAGGED OR METATAG?
               S S1 (10N) (QUERY OR QUERIES OR QUERYING OR SQL )
         3143
S2
                S NODE? ? (3N) (TYPE OR TYPES OR SORT OR SORTS OR KIND OR KINDS)
         7379
                S ((POSITION? ? OR PLACE OR PLACEMENT? ? OR LEVEL? ? OR SUBLEVEL? OR
       269217
S4
HIERARCHY OR HIERARCHIES) (3N) (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR
KEY()WORD? ? OR TERM? ? OR WORD? ? )) OR PARENT? ? OR CHILD OR CHILDREN
                S (NAME()SPACE? ? OR NAMESPACE? ?)()(ID OR IDENTIFICATION? ? OR
           69
IDENTIFIER? ?)
      3309481
               S LENGTH OR LONG OR SIZE? ?
S6
               S ELEMENT? ? (3N) (NAME? ? OR TITLE? ? OR LABEL? ? OR ID OR
S7
        19171
IDENTIFICATION? ? OR IDENTIFIER? ?)
                S ELEMENT? ? (3N) (ATTRIBUTE? ? OR PROPERTY OR PROPERTIES OR CONTENT? ?)
        29148
S8
                S S2 (30N) (S3 OR S4) (30N) (S5 OR S6) (30N) S7 (30N) S8
S9
S10
                IDPAT (sorted in duplicate/non-duplicate order)
                IDPAT (primary/non-duplicate records only)
S11
               S S1 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
S12
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ? )
                S S12 (30N) (S3 OR S4) (30N) (S5 OR S6) (30N) S7 (30N) S8
            1
S13
S14
            1
                S S13 NOT S11
 ; show files
```

# [File 348] EUROPEAN PATENTS 1978-2006/ 200702

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\*File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.

# [File 349] PCT FULLTEXT 1979-2006/UB=20070111UT=20070104

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\*File 349: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.

### [File 350] **Derwent WPIX** 1963-2006/UD=200703

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\*File 350: DWPI has been enhanced to extend content and functionality of the database. For more info, visit http://www.dialog.com/dwpi/.

11/5K/1 (Item 1 from file: 348) Links

**EUROPEAN PATENTS** 

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02033826

# Method for evaluating XML twig queries using index structures and relational query processors.

Ein Verfahren zur Evaluierung von XML Pfadanfragen anhand von Indexstrukturen und relationalen Anfrageprozessoren.

Methode pour evaluer des requetes sur des portions arborescentes utiliisant des structures d'index et processeurs de requetes relationnels.

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	Country	Number	Kind	Date	
Patent	EP	1635272	A2	20060315	(Basic)
	EP	1635272	A3	20060322	
Application	EP	2005270053		20050907	
Priorities Priorities	US	937641		20040909	

# **Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;

FI; FR; GB; GR; HU; IE; IS; IT; LI; LT;

LU; LV; MC; NL; PL; PT; RO; SE; SI; SK;

TR;

# **Extended Designated States:**

AL; BA; HR; MK; YU;

IPC	Level	Value	Position	Status	Version	Action	Source	Office
G06F-0017/30	A	I	F	В	20060101	20060124	Н	EP

### **Abstract** EP 1635272 A3

A framework defining a family of index structures useful in evaluating XML path expressions (i.e., twigs) in XML database is disclosed. Within this framework, two particular index structures with different space-time tradeoffs are presented that prove effective for the evaluation of twigs with value conditions. These index structures can be realized using access methods of an underlying relational database system. Experimental results show that the indices disclosed achieve significant improvement in performance for evaluating twig queries as compared with previously proposed XML path indices.

**Abstract Word Count: 85** 

NOTE: 8b

NOTE: Figure number on first page: 8b

Type	Pub. Date	Kind	Text
Application:	20060315	A2	Published application without search report
Search Report:	20060322	A3	Separate publication of the search report
Change:	20060906	A2	Title of invention (German) changed: 20060906
Change:	20060906	A2	Title of invention (English) changed: 20060906
Change:	20060906	A2	Title of invention (French) changed: 20060906
Change:	20060913	A2	Title of invention (German) changed: 20060913
Change:	20060913	A2	Title of invention (English) changed: 20060913
Change:	20060913	A2	Title of invention (French) changed: 20060913
Change:	20060927	A2	Title of invention (German) changed: 20060927
Change:	20060927	A2	Title of invention (English) changed: 20060927
Change:	20060927	A2	Title of invention (French) changed: 20060927
Change:	20061129	A2	Title of invention (German) changed: 20061129
Change:	20061129	A2	Title of invention (English) changed: 20061129
Change:	20061129	A2	Title of invention (French) changed: 20061129

Publication: English Procedural: English Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200611	1007
SPEC A	(English)	200611	8992
Total Word Count (Document A) 10001			
Total Word Count (Document B) 0			
Total Word Count (All Documents) 10001			

Specification: ...FIG. 3. For example, the value index in Lore (e.g., as described in R. Goldman, J. McHugh and J. Widom, "From semistructured data to XML: Migrating the Lore data model and query language," WebDB Workshop, 1999) returns the ID of an attribute or element given its tag name and value. This index may be viewed as a B+-tree index on the SchemaPath and LeafValue, where SchemaPath consists of paths with length one (i.e., the tag name), and the last ID in IdList is returned.

The forward link index in Lore, supra, returns the **ID** of an **element** or **attribute** given its tag name and the ID of its **parent**. This may be viewed as a B+-tree index on HeadId and SchemaPath, where HeadId is the start ID of the path, SchemaPath has **length** one, and the last ID in IdList is returned.

Similarly, the DataGuide (e.g., R. Goldman and J. Widom, "DataGuides: Enabling query formulation and optimisation...

11/5K/3 (Item 3 from file: 349) Links

**PCT FULLTEXT** 

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00777960

# AUTOMATED PRODUCT DESIGNER SYSTEM AND METHOD

SYSTEME ET PROCEDE DE CONCEPTION AUTOMATISEE DE PRODUITS

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   (For all designated states except: US)
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- **DAUGHERTY Ricky J**; 5474 Rockpoint Drive, Clifton, VA 20124 US; US(Residence); US(Nationality)
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#### Legal Representative:

BEDNAREK Michael D(et al)(agent)

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	Country	Number	Kind	Date
Patent	WO	200111491	A1	20010215
Application	WO	2000US21369		20000804
Priorities	US	99147338		19990806

**Designated States:** (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;

GR; IE; IT; LU; MC; NL; PT; SE;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML;

MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;

UG; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

#### Main International Patent Classes (Version 7):

IPC	Level
G06F-017/21	Main

Publication Language: English Filing Language: English Fulltext word count: 12986

### English Abstract:

A system and method for designing a graphics product on-line. When a request to design a product is received, user personal information and preference are recorded (125), a template and a graphic design in accordance with the user personal information and preferences are retrieved and the templates (130), graphic design and at least a portion of the user personal information are combined to form a graphic product (135), which is thereafter made available to the user on-line (150). In the preferred embodiment, front end webservers communicate with on-line users while design activities and data storage functions are distributed to different servers, whereby the overall system is more stable and easily scalable.

# French Abstract:

L'invention concerne un systeme et un procede de conception d'un produit graphique en ligne, lesquels consistent, lors de la reception d'une demande de conception d'un produit, a enregistrer (125) des informations et preferences personnelles utilisateurs, a extraire une matrice et une conception graphique conformes a ces informations et preferences, et a combiner cette matrice (130), la conception graphique et au moins une portion des informations, afin de former un produit graphique (135), lequel devient ensuite disponible pour l'utilisateur en ligne (150). Dans le mode de realisation prefere, des serveurs frontaux du Web communiquent avec des utilisateurs en ligne tandis que les activites de conception et les fonctions de stockage de donnees sont reparties entre les differents serveurs, de sorte que le systeme global est plus stable et plus facilement evolutif.

Туре	Pub. Date	Kind	Text
Publication	20010215	Al	With international search report.
Publication	20010215	Αl	With amended claims.
Examination	20011011		Request for preliminary examination prior to end of 19th month from priority date
Correction	20020912		Corrected version of Pamphlet:
Republication	20020912	Al	With international search report.
Republication	20020912	Al	With amended claims.

# **Detailed Description:**

...version" 1.0" encoding"UTF-87>

<ProductType>

<desc>Sample Product Type</desc>

<textfield id="Field F'>

<group> I <group>

<locked>

<display>Enter a Value</display>

<size>40</size >

<default>liveprint.com</default>

</textfield>

- 31

<ProductType>

To parse this product type into a ColdFusion TM query, the following steps are performed.

I Create a... ... example, assume the product type file path is

"c:

work

ptype.xmU' DFParse can now be invoked with the correct parameters.

<CFX-DFParse CMD="ReadType" XML-IN="c:

work

ptype.xml"

QUERY ="pQuery" INDEX="I 19>

DFParse reads the product type **XML** file, validates the contents of the file, and builds the CF query. A single row will be added to the query (because the product type... ...will have FieldName = "Fieldl", Value = "livepnint.com", IsMandatory--"Y", DisplayName="Enter a Value", Width="40", and 32 Enabled="+'. The following table shows the relationship of **query names** to **XML elements**.

#### FieldName Id attribute of textfield

Value Default

IsMandatory" Y" if required exists, otherwise "N"

DisplayNaine Display

Width Size

Enabled 'Y' if field exists . ..... if not, however, this only applies to rows that existed in the query prior to calling DFParse.

The index parameter affects the **position** in the enabled **string** to which the 'Y' or "2' is applied.

The ColdFusionTm query "pQuery" now looks like this.

FieldName Field I Value Liveprint.com IsMandatory Y DisplayName ... 14/5K/1 (Item 1 from file: 349) Links

**PCT FULLTEXT** 

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00861529

# METHOD AND APPARATUS FOR EFFICIENT MANAGEMENT OF XML DOCUMENTS METHOD AND APPARATUS FOR EFFICIENT MANAGEMENT OF XML DOCUMENTS

PROCEDE ET APPAREIL DE GESTION EFFICACE DE DOCUMENTS XML

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# L'egal Representative:

# KUDIRKA Paul E(agent)

Kudirka & Jobse, LLP, One State Street, Suite 1510, Boston, MA 02109; US;

-,-	Country	Number	Kind	Date
Patent	WO	200195155	A2-A3	20011213
Application	WO	2001US17726		20010601
Priorities Priorities	US	2000588195		20000606

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;

GR; IE; IT; LU; MC; NL; PT; SE; TR;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML;

MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;

UG; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

# Main International Patent Classes (Version 7):

	IPC	Level
G06F-017/30		Main
G06F-017/22		

Publication Language: English Filing Language: English

Fulltext word count: 27332

# **English Abstract:**

An in-memory storage manager represents XML-compliant documents as a collection of objects in memory. The collection of objects allows the storage manager to manipulate the document, or parts of the document with a consistent interface and to provide for features that are not available in conventional XML documents, such as element attributes with types other than text and documents that contain binary rather than text information. In addition, in the storage manager, the XML-compliant document is associated with a schema document which defines the arrangement of the document elements and attibutes. The schema data associated with a document can contain a mapping between document elements and program code to be associated with each element. The storage manager further has methods for retrieving the code from the element tag. The retrieved code can then be invoked using attributes and content from the associated element and the element then acts like a conventional object. Further, the storage manager allows real-time access by separate process operating in different contexts. The objects that are used to represent the document are constructed from common code found locally in each process. In addition, the data in the objects is also stored in memory local to each process. The local memories are synchronized by means of a distributed memory system that continually equates the data copies of the same element in different processes. Client-specified collections are managed by a separate collection manager. The collection manager maintains a data structure called a "waffle" that represents the XML data structures in tabular form. A record set engine that is driven by user commands propagates a set of updates for a collection to the collection manager. Based on those updates, the collection manager updates index structures and may notify waffle users via the notification system.

#### French Abstract:

L'invention concerne un gestionnaire de stockage en memoire qui represente des documents conformes au langage XML sous forme de collection d'objets en memoire. La collection d'objets permet au gestionnaire de stockage de manipuler un document, ou des parties de document avec une interface constante et de fournir des caracteristiques non disponibles dans des documents XML habituels, telles que des attributs d'elements avec des types autres que du texte et des documents qui contiennent des informations binaires plutot que du texte. Dans le gestionnaire de stockage, le document conforme au langage XML est, par ailleurs, associe a un document schema qui definit l'agencement des elements et des attributs du document. Les donnees schema associees a un document peuvent contenir une application entre les elements de document et le code de programme a associer a chaque element. Le gestionnaire de stockage possede en outre des procedes d'extraction du code de l'etiquette de l'element. Le code extrait peut alors etre appele au moyen des attributs et du contenu provenant de l'element associe, l'element agit ensuite comme un objet classique. Le gestionnaire de stockage permet egalement un acces en temps reel par un processus separe operant dans differents contextes. Les objets qui sont utilises pour representer le document sont construits a partir du code commun trouve localement dans chaque entite d'execution. Les donnees dans les objets sont aussi stockes dans la memoire, localement par rapport a chaque entite d'execution. Les memoires locales sont synchronisees au moyen d'un systeme de memoire distribuee qui egalise les copies de donnees du meme element dans differentes entites d'execution. Des collections specifiques au client sont gerees par un gestionnaire de collection distinct. Le gestionnaire de donnees maintient une structure de donnees appelee <= gaufre>= qui represente les stuctures de donnees XML sous forme tabulaire. Un moteur d'ensembles d'enregistrements entraine par des commandes utilisateur transmet un ensemble de mises a jour relatives a une collection au gestionnaire de collection. Sur la base de ces mises a jour, le gestionnaire de collection met a jour des structures d'indices et peut informer les utilisateurs de la <= gaufre>= par l'intermediaire du systeme de notification.

Type	Pub. Date	Kind	Text
Publication	20011213 A	ΙΔ΄/	Without international search report and to be
	ubilication 20011213		republished upon receipt of that report.

Examination	20020214		Request for preliminary examination prior to end of 19th month from priority date
Search Rpt	20031002		Late publication of international search report
Republication	20031002	A3	With international search report.
Republication	20031002	A3	Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

# **Detailed Description:**

...element, Found is FALSE and no value is returned.

w0 01/95155 PCT/USO1/17726
FindAttributeAsLong (BSTR i
Name, Gets any arbitrary attribute as Long. The
long \* cLpValue, VARIANT-BOOL attribute must have been set as the given
p
pFound); type or be specified as that type in the
document... ...attribute is not in the element,
VARIANT-BOOL \* o
pFound); Found is FALSE and no value is returned.

FindContentElementByName (BSTR Within the context of this element, find an i Name, IGrooveElement element with the specified tag name. If the' c@ ppElement, VARIANT-BOOL element is not found, Found is FALSE and o pFound); no element reference is returned.

FindContentElementByNameAndAttribut Within the context of. this element, find an e (BSTR i -Name, BSTIR element with the specified tag name and i-AttributeName, BSTIR i-AttributeValue, attribute name with the specified attribute IGrooveElement \*\* o -ppElement, value. If the element is not found, Found is VARIANT BOOL \* 0 pFound); FALSE and no element reference is returned FindParent (IGrooveElement Gets an object's parent element. An o ppParent, VARIANT element can have only a single parent and pplFound); may only be referenced from a single content entry of a single element. If the element does not have a parent, Found is FALSE and no value is returned.

GetActuate (GrooveXLinkActuate Returns the value of the Actuate parameter

pActuate); in this elements link attribute.

47
w0 01/95155 PCT/USO1/17726
GetAttributeCount (long c@
pCount); Returns the number of attributes an element has.

GetContentCount (long o pCount); Returns the number of content and text entries in this element.

GetContentType (long (inverted exclamation mark)
Ordinal, Returns the type... ...GetShow (GrooveXLinkShow Returns the value of the Show parameter in p
pShow); this elemenfs link attribute.

IncrementAttributeAsLong (BSTR Adds 1 to the value of a long integer type i-Name, long \* c@ pOldValue); attribute.

Insert:Content (long i.Ordinal, BSTIR Inserts the text entry at the specified ordinal i-Text, GrooveContentType i
Type); location
InsertContentElement (long i-Ordinal, Inserts the element at the specified ordinal (inverted exclamation mark)GrooveElement \* LpElement); location
InsertContentProcessinginstruction (long Inserts a Text processing instruction, with i-Ordinal... ...been set as the given type or be specified as that type in the document schema.

OpenAttributeAsLong (BSTR i Name, Gets any arbitrary attribute as **Long**. The long \* p pValue); attribute must have been set as the given type or be specified as that type in the document schema.

OpenAttributeAsVARIANT (BSTR... ...inverted exclamation mark) of the elemenfs attributes as ((inverted exclamation mark)GrooveStringStringEnum text.

p
ppAttributes);

OpenAttributeVariantEnum Enumerates al(inverted exclamation mark) of the element's attributes as ((inverted exclamation mark)GrooveNameValueEnum variant data types.

ppEnum);

OpenBoundCode (1grooveBounclCode Returns an instance of the object bound to

0

ppBoundCode); the element.

OpenContentComment ...BSTR \* o pComment); contained in this element at the specified Ordinal position.

SO

w0 01/95155 PCT/USO1/17726

OpenContentElement (long i-Ordinal, Returns the **child** element interface that is a (inverted exclamation mark)GrooveElement \*\* o-ppElement); contained in this element at the specified Ordinal position.

OpenContentElementByName (BSTR Within the context of this **element**, find an **i-Name**, (inverted exclamation mark)GrooveElement element with the specified tag name and c@

ppElement); returri its interface.

OpenContentElementByNameAndAttribu Within the context of this element, find an te (BSTR i

Name, BSTR element with the specified tag name and i-AttributeName, BSTR i-AttributeValue, attribute name with the specified attribute IGrooveElement \*\* o ppElement); value.

OpenContentElementEnum Returris an enumeration of al(inverted exclamation mark) child content (IGrooveElementEnum elements (non-recursively).

o ppElements);

OpenContentElementEnumByName Returns an enumeration of afi child content (BSTR i

Name, IgrooveElementEnum \*\* elements (non-recursively). Only elements

ppElernents); with the given name will be returned.

OpenContentElementEnumByNameAnd Returris an enumeration of al(inverted exclamation mark) content Attribute (BSTR i

Name, BSTR elements within the scope of this element

i-AttributeName, BSTIR LAttributeValue, that have the specified tag name and (inverted exclamation mark)GrooveElementEnum \*\* o

ppElements.....17726

OpenContentProcessinginstructionText Returns the PI text of the XIVIL processing

(long (inverted exclamation mark)-Ordinal, BSTR \* p

pText); instruction at the specified ordinal position.

OpenContentText (long (inverted exclamation mark)
Ordinal, BSTR Returns the context text at the specified
\* o
pText); ordinal position.

OpenContentTextEnum Enumerates the text entries ((inverted exclamation mark)GrooveBSTREnum...inverted exclamation mark)GrooveReadOnIyElement.

#### TABLE 16

interface IgrooveReadOniyElement: (inverted exclamation mark)GrooveElement OperiReadOnlyParent Returns a read-only element interface to the ((inverted exclamation mark)GrooveReadOniyElement parent of this element.

o ppParent);
OpenContentReadOniyElement (long Retums a read-only element interface to the (inverted exclamation mark)
Ordinal, lgrooveReadOniyElement content element at the specified Ordinal c@
ppElement); position.

OpenContentReadOnlyElementByNam Within the context of this element, find an e (BSTR i - Name, element with the specified tag name and (inverted exclamation mark)GrooveReadOnlyElement return its read-only interface.

ppElement);
57

w0 01/95155 PCT/USO1/17726

FindContentReadOnlyElementByName Within the context of this element, find an (BSTR i

Name, element with the specified tag name and

(inverted exclamation mark)GrooveReadOnlyElement return its read-only interface. If the element is

ppElement, VARIANT-BOOL not found, Found is FALSE and no element o

pFound); reference is returned.

OpenContentReadOnlyElementEnum Returns an enumeration of all child content (1grooveReadOnlyElementEnum elements read-only interfaces o ppElements); (non-recursively).

OpenContentReadOniyElementEnumB Returns an enumeration of al(inverted exclamation mark) child content yName (BSTR i

Name, elements read-only interfaces

lgrooveReadOnlyElementEnum (non-recursively). Only elements with the

o given name will be returned.

ppElements);
Table 17 illustrates an interface 1214 ((inverted exclamation...

```
Description
Set
        Items
               S XML OR EXTENSIBLE() MARKUP() LANGUAGE OR (MARK OR MARKED)() UP OR MARKUP OR
        14762
S1
SGML OR HTML OR TAG OR TAGS OR TAGGED OR METATAG?
               S S1 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ? OR QUERY OR QUERIES OR QUERYING OR SQL )
                S NODE? ? (3N) (TYPE OR TYPES OR SORT OR SORTS OR KIND OR KINDS)
                S ((POSITION? ? OR PLACE OR PLACEMENT? ? OR LEVEL? ? OR SUBLEVEL? OR
HIERARCHY OR HIERARCHIES) (3N) (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR
KEY()WORD? ? OR TERM? ? OR WORD? ? )) OR PARENT? ? OR CHILD OR CHILDREN
                S (NAME()SPACE? ? OR NAMESPACE? ?)()(ID OR IDENTIFICATION? ? OR
IDENTIFIER? ?)
               S LENGTH OR LONG OR SIZE? ?
       885889
S6
         3408 S ELEMENT? ? (3N) (NAME? ? OR TITLE? ? OR LABEL? ? OR ID OR
IDENTIFICATION? ? OR IDENTIFIER? ?)
               S ELELMENT? ? (3N) (ATTRIBUTE? ? OR PROPERTY OR PROPERTIES OR CONTENT? ?)
S8
            0
S9
                S S2 AND (S3 OR S4) AND (S5 OR S6) AND S7
 ; show files
```

[File 347] **JAPIO** Dec 1976-2006/Sep(Updated 061230)

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```
Items
                Description
Set
                S XML OR EXTENSIBLE() MARKUP() LANGUAGE
        44412
S1
                S (MARK OR MARKED) () UP OR MARKUP OR SGML OR HTML OR TAG OR TAGS OR TAGGED
       150369
S2
OR METATAG?
                S S1 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
         4375
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ?)
                S (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR KEY()WORD? ? OR
        87977
S4
TERM? ? OR WORD? ? ) (5N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR SEARCHING
OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR LOCATOR? ?)
                S S4 (10N) S1
          154
                S S4 AND S1
S6
          500
                S NODE? ? (3N) (TYPE OR TYPES OR SORT OR SORTS OR KIND OR KINDS)
         4718
S7
                S ((POSITION? ? OR PLACE OR PLACEMENT? ? OR LEVEL? ? OR SUBLEVEL? OR
      1675484
S8
HIERARCHY OR HIERARCHIES) (5N) (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR
KEY()WORD? ? OR TERM? ? OR WORD? ? )) OR PARENT? ? OR CHILD OR CHILDREN
                S (NAME()SPACE? ? OR NAMESPACE? ?)()(ID OR IDENTIFICATION? ? OR
            1
IDENTIFIER? ?)
                S LENGTH OR LONG OR SIZE? ?
S10
      6974237
              S ELEMENT? ? (3N) (NAME? ? OR TITLE? ? OR LABEL? ? OR ID OR
S11
        10562
IDENTIFICATION? ? OR IDENTIFIER? ?)
                S ELEMENT? ? (3N) (ATTRIBUTE? ? OR PROPERTY OR PROPERTIES OR CONTENT? ?)
        42713
S12
                S S6 AND (S7 OR S8) AND (S9 OR S10) AND S11 AND S12
S13
                S S3 AND (S7 OR S8) AND (S9 OR S10) AND S11 AND S12
S14
                S S2 (10N) (RETRIEVE? ? OR RETRIEVING OR RETRIEVAL OR SEARCH?? OR
S15
SEARCHING OR SEEK? ? OR SEEKING OR FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING OR
LOCATOR? ?)
                S S15 AND (S7 OR S8) AND (S9 OR S10) AND S11 AND S12
            0
S16
 ; show files
```

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```
Items
                Description
Set
                S XML OR EXTENSIBLE() MARKUP() LANGUAGE OR (MARK OR MARKED)() UP OR MARKUP OR
       179854
S1
SGML OR HTML OR TAG OR TAGS OR TAGGED OR METATAG?
         6138
                S S1 (10N) (QUERY OR QUERIES OR QUERYING OR SQL )
S2
53
         4718
                S NODE? ? (3N) (TYPE OR TYPES OR SORT OR SORTS OR KIND OR KINDS)
                S ((POSITION? ? OR PLACE OR PLACEMENT? ? OR LEVEL? ? OR SUBLEVEL? OR
S4
      1648269
HIERARCHY OR HIERARCHIES) (3N) (CHARACTER? ? OR STRING? ? OR PHRASE? ? OR KEYWORD? ? OR
KEY()WORD? ? OR TERM? ? OR WORD? ? )) OR PARENT? ? OR CHILD OR CHILDREN
                S LENGTH OR LONG OR SIZE? ?
      6974245
                S ELEMENT? ? (3N) (NAME? ? OR TITLE? ? OR LABEL? ? OR ID OR
        10562
IDENTIFICATION? ? OR IDENTIFIER? ?)
                S ELEMENT? ? (3N) (ATTRIBUTE? ? OR PROPERTY OR PROPERTIES OR CONTENT? ?)
        42713
S7
                S S2 AND (S3 OR S4) AND S5 AND S6 AND S7
           0
S8
 ; show files
```

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# Hiding Tree Structured Data and Queries from Untrusted Data Stores

Lin, Ping; Candan, K Selcuk

Information Systems Security v14n4 pp: 10-26

Sep/Oct 2005

ISSN: 1065-898X Journal Code: ISTS

Word Count: 8221

Text:

...for the data store to guess the target node from the redundancy set if m is small, it becomes much more difficult to guess the parent-child relations between sequential node accesses. And the probability to discover a path is reduced exponentially with the increase of length of the path hence...

...how our protocol can be extended to provide private access to XML documents.

In an XML document, each node of the tree corresponds to an element or an attribute of an element in the XML document. The root node contains the document's root. A child node corresponds to a subelement or an attribute of the parent node. For each child of a node, in addition to the pointer to the child, there can be a tag in the node that indicates the name of the child node. If the child is a sub-element, the name is the element tag of the sub-element. If the child is an attribute, the name is the attribute name.

XML query processing is concerned with **finding** the instances of a given pattern tree (query tree or twig) in a given target tree (XML document or document collection): given directed, labeled trees...